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Feb 13, 1990

DERWENT-ACC-NO: 1990-088461

DERWENT-WEEK: 199602

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TITLE: Ink compsns. for printing sterilisable laminate film - comprising organic solvent-soluble linear polyurethane resin and blocked isocyanate cpd.

PATENT-ASSIGNEE:

ASSIGNEE

CODE

TOYO INK MFG CO

TOXW

PRIORITY-DATA: 1988JP-0194035 (August 3, 1988)

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PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
<input type="checkbox"/> JP 02043275 A	February 13, 1990		006	
<input type="checkbox"/> JP 95113099 B2	December 6, 1995		006	C09D011/10

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
JP 02043275A	August 3, 1988	1988JP-0194035	
JP 95113099B2	August 3, 1988	1988JP-0194035	
JP 95113099B2		JP 2043275	Based on

INT-CL (IPC): C09D 11/10

RELATED-ACC-NO: 1989-336182;1990-088049

ABSTRACTED-PUB-NO: JP 02043275A

BASIC-ABSTRACT:

The ink compsn. comprises a mixt. consisting of organic solvent-soluble linear polyurethane resin and isocyanate cpd. blocked by oxime or active methylene cpd. as main binder.

USE/ADVANTAGE - Laminate film printed with the ink compsn. is useful for packaging foods, medical tools etc. which have to withstand sterilisation. Films printed with the ink compsn. have improved storage stability and generates no blocking phenomena due to storing in roll form. Laminated sheet of thus printed film gives no sepn.

between constitution films and blistering caused by sterilisation.

In an example, polyester diol, obtd. by reacting adipic acid and 1,4-butanediol, (228 pts. wt.) and isophorone diisocyanate, (51 pts. wt) were reacted in MEK at 75 deg C for 6 hrs. Thus obtd. prepolymer soln. (473 pts. wt. was added to the mixt. of isophorone diamine (18 pts. wt) di-n-butylamine (3 pts. wt.) KEK 286 and IPA 220 and reacted at 50 deg C for 1 hr., so that a linear polyurethane resin soln. with 30% solid content was obtd. The ink compsn. was prepd. by kneading, pts. wt., titanium oxide 30, the linear polyurethane resin soln. 50, toluene 7, MEK 7, IPA 6 and triisocyanate, an adduct from trimethylol-propane and hexamethylenediisocyanate (mol. ratio = 1:3), blocked by diethyl malonate 2.3 and thinning with MEK/toluene/IPA (30/40/30) mixed solvent.

CHOSEN-DRAWING: Dwg.0/0

TITLE-TERMS: INK COMPOSITION PRINT STERILE LAMINATE FILM COMPRISE ORGANIC SOLVENT SOLUBLE LINEAR POLYURETHANE RESIN BLOCK ISOCYANATE COMPOUND

DERWENT-CLASS: A25 A97 G02

CPI-CODES: A05-G01E; A08-E01; A11-C04A; A12-P01A; A12-S06B; A12-W07D; G02-A04A;

UNLINKED-DERWENT-REGISTRY-NUMBERS: 0271U; 0437U ; 1966U

POLYMER-MULTIPUNCH-CODES-AND-KEY-SERIALS:

Key Serials: 0004 0034 0036 3003 0037 0222 0224 0072 0228 1286 1294 1296 1300 3185  
1323 3077 1450 1719 1758 1760 3132 2071 2072 2148 2152 2155 2172 2314 2318 2324  
2397 2507 2513 2522 2572 2575 2598 2600 2656 2719 2721 2726 2769 2774 2780

Multipunch Codes: 014 03& 038 07& 075 09& 13- 149 15- 150 155 157 160 169 170 173  
174 177 206 207 209 212 239 246 273 297 298 311 313 316 323 331 332 344 346 355 357  
364 366 367 381 398 40- 402 435 44& 443 477 50& 502 53& 532 536 537 54& 541 597 633  
645 662 681 720

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C1990-039104

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# PATENT ABSTRACTS OF JAPAN

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(51)Int.Cl.

C09D 11/10

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(21)Application number : 63-194035 (71)Applicant : TOYO INK MFG  
CO LTD

(22)Date of filing : 03.08.1988 (72)Inventor : KATO SHUNICHI

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**(54) LAMINATE INK COMPOSITION FOR HEAT STERILIZATION**

**(57)Abstract:**

**PURPOSE:** To form an ink composition which has good storage stability and residence stability and does not undergo blocking during storage in a roll of a printing film before laminating by using a mixture of an organic solvent- soluble linear polyurethane resin with a specified blocked isocyanate compound as the principal binder.

**CONSTITUTION:** This laminate ink composition comprises a mixture of an organic solvent-soluble linear polyurethane resin with an isocyanate compound blocked with an oxime or an active methylene compound as the principal binder. As the linear polyurethane resin, one having an MW in the range of 5000-150000 is desirable.

Examples of a blocking agent of the blocked isocyanate compound include oximes such as acetone oxime, 2-butanone oxime and cyclohexanone oxime and active methylene compounds such as an acetoacetic ester, dimethyl malonate and acetylacetone. The amount

of the blocked isocyanate compound added is about 0.1-50 pts.wt. per 100 pts.wt. linear polyurethane resin (in terms of solid matter).

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## LEGAL STATUS

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decision of rejection]

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application other than the  
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application]

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examiner's decision of rejection]

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